

CLAIMS

1. A method for fabricating a substrate with a parallax barrier layer, the method comprising steps of:

5 (a) preparing a first substrate, which has a first principal surface and a second principal surface that are opposed to each other and which is made of a transparent material;

10 (b) providing a parallax barrier layer with a predetermined pattern on the first principal surface of the first substrate; and

15 (c) forming a first layer, which satisfies a prescribed positional relationship with the parallax barrier layer, on the second principal surface of the first substrate.

2. The method of claim 1, wherein the step (b) includes a step of making a first alignment mark.

20 3. The method of claim 2, wherein the step (c) includes a step of locating the first alignment mark through the first

substrate and achieving alignment with respect to the first alignment mark.

4. The method of claim 2 or 3, wherein the first
5 alignment mark is made of a material of the parallax barrier layer.

5. The method of one of claims 1 to 4, wherein the parallax barrier layer is made of a metallic material.

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6. The method of one of claims 1 to 5, wherein the step
(c) includes a step of forming a color filter layer as the first layer.

15 7. The method of one of claims 1 to 5, wherein the step
(c) includes a step of forming a black matrix layer as the first layer.

8. The method of one of claims 1 to 7, wherein the step
20 (c) further includes a step of making a second alignment mark

of a material of the first layer.

9. A method for fabricating a display device, the method comprising steps of:

5 (A) preparing a substrate with a parallax barrier layer by the method of one of claims 1 to 8;

(B) securing a second substrate to the substrate with the parallax barrier layer with a predetermined gap provided between the two substrates; and

10 (C) forming a display medium layer between the substrate with the parallax barrier layer and the second substrate.

10. The method of claim 9, further comprising a step of
15 (D) dividing a panel, in which the substrate with the parallax barrier layer and the second substrate are combined with each other, into a number of smaller panels after one of the steps (B) and (C).

11. The method of claim 9 or 10, wherein the display
20 medium layer is a liquid crystal layer.

12. The method of claim 11, further comprising a step of arranging a polarizer on a viewer-side surface of the parallax barrier layer after the step (D).

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13. A display device fabricated by the method of one of claims 9 to 12.

14. A display device comprising:

10 a first substrate, which is arranged closer to a viewer and which is made of a transparent material;

 a second substrate opposed to the first substrate;

 a display medium layer interposed between the first and second substrates; and

15 a parallax barrier layer provided on the surface of the first substrate so as to face the viewer.

15. A display device comprising:

 a first substrate, which is arranged closer to a viewer
20 and which is made of a transparent material;

a second substrate opposed to the first substrate;
a liquid crystal layer interposed between the first and
second substrates;
a polarizer located closer to the viewer than the first
5 substrate is; and
a parallax barrier layer provided between the first
substrate and the polarizer.